

# GONOCOCCAL URETHRAL STRICTURE AND HYPERTENSION

## EXPERIENCE IN UGANDA\*

BY

K. SOMERS

*Department of Medicine, Makerere University Medical School, Kampala, Uganda*

The incidence of gonorrhoea in urban communities in Uganda remains high and increasing awareness of the availability of radical cure is a major factor in the large attendance figures at hospital. The estimated number of attendances for gonorrhoea at Mulago Hospital in Kampala is 5,550 per year (Kibuka-Musoke, 1964). Resulting from past untreated or inadequately treated infection, urethral stricture accounts for approximately 14 per cent. of the total attendance for gonorrhoea. The chief symptoms of stricture, difficulty in micturition and loss of force of the flow of urine, are the usual reasons for presentation at the bougie clinic. In addition, acute retention may require hospitalization for urgent relief by suprapubic cystotomy or other means when bougie passage fails to relieve the obstruction. Perineal abscess, fistula, and inguinal hernia are other surgical complications of urethral stricture presenting at Mulago.

Chronic urinary obstruction is a recognized antecedent of pyelonephritis and hypertension (Colby, 1959). At the Cardiac Clinic at Mulago Hospital, we have been impressed by the number of patients with hypertensive heart disease who also have chronic urethral stricture (Somers, 1960). Accordingly, we decided to make an exploratory study of the incidence of hypertension in the stricture patients.

### Method

208 consecutive out-patients and in-patients were examined. Blood pressure was recorded by the same observer in each instance using the auscultatory method. In the majority of patients several readings were taken at successive visits to the bougie clinic and while the in-patients were in hospital.

No patient was treated for hypertension during the observation period. Hypertension was deemed to be present if the lowest of successive blood pressure readings was more than 145 mm. Hg systolic and 90 mm. Hg

diastolic. In the case of cystotomized patients, only readings taken after relief of urinary obstruction were considered.

### Results

The highest incidence of urethral stricture occurred in the age groups 36 to 45 and 46 to 55 years and accounted for 57 per cent. (119 out of 208) of the patients examined; a decreasing percentage was found in successive decades (Table I). The smaller numbers seen in the age groups below 36 years suggest that it takes from 10 to 15 years for stricture symptoms to arise after the initial infection.

TABLE I  
INCIDENCE OF URETHRAL STRICTURE BY AGE GROUP

Age Group (yrs)	No. of Patients
16 to 25	3
26 to 35	24
36 to 45	58
46 to 55	61
56 to 65	39
Over 65	23
Total	208

65 per cent. (136 out of 208) of patients with stricture had experienced symptoms for more than 5 years, and most of these belonged to the older age groups (Table II).

TABLE II  
INCIDENCE OF URETHRAL STRICTURE WITH SYMPTOMS EXCEEDING 5 YEARS' DURATION, BY AGE GROUPS

Age Group (yrs)	Percentage of Patients
26 to 35	50
36 to 45	58.5
46 to 55	69
56 to 65	77
Over 65	82.5

Hypertension as defined above was observed in 23.5 per cent. (49 out of 208) patients examined.

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### Discussion

The aetiological role of pyelonephritis in the causation of hypertensive disease is well recognized. In chronic nonobstructive pyelonephritis, Griebble and Jackson (1959) found a 25 per cent. incidence of hypertension. Retrograde ascending infection has been postulated for the production of chronic pyelonephritis in man (McCabe and Jackson, 1959).

In various types of obstructive urinary tract disease, retrograde infection is likely to be of particular significance in the production of chronic pyelonephritis (Colby, 1959). In an autopsy study of renal disease at Mulago Hospital, Hutt and Sood (1963) found a 48 per cent. association of chronic pyelonephritis with urethral stricture. It may therefore be suggested that the hypertension found in this series of patients with urethral stricture is directly associated with the urethritis.

In a study of bacteraemia complicating dilatation of urethral stricture at this centre, Tulloch, Wilson, and King (1964) noted a diastolic blood pressure of 100 mm. Hg or greater in fourteen of 48 patients (28 per cent.). The overall percentage (23.5) of hypertension, as defined, in the present larger series is comparable to this incidence, and is similar to the figure mentioned by Griebble and Jackson in their nonobstructive pyelonephritis group.

The present study has been in the nature of a simple exploration. In pointing to a high incidence of hypertension in the urethral stricture population of Uganda, it indicates the need for fuller investigation of the aetiological role of stricture in the genesis of hypertensive disease and the great importance of early and complete treatment of primary gonococcal infection whenever it occurs.

### Summary

In 208 patients with urethral stricture following gonorrhoea studied at Mulago Hospital, the

incidence of hypertension was 23.5 per cent. The role of urinary obstruction and ascending pyelonephritis is discussed. Urethral stricture must be regarded as an important cause of hypertension in Uganda.

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### Stricture gonococcique de l'urètre et hypertension. Expérience en Uganda

#### RÉSUMÉ

Chez 108 malades atteints de stricture gonococcique de l'urètre étudiés à l'hôpital de Mulago, l'incidence de l'hypertension fut de 23,5%. L'auteur discute l'importance de l'obstruction urinaire et de la pyélonéphrite ascendante.

Il faut regarder la stricture de l'urètre comme cause importante de l'hypertension en Uganda.